

Lecture 8: Scientific and Academic Use of English

The final and most advanced axis of the syllabus introduces students to the language of research. This is essential for those wishing to pursue a Master's or PhD in Sports Science.⁸

8.1 The Academic Word List (AWL) in Sport

General English vocabulary is insufficient for academic writing. Students must master the Academic Word List.⁸

Table 4: General vs. Academic Vocabulary

General Term	Academic/Scientific Term	Example of Usage
Look at	Investigate / Examine	"We investigated the effects of caffeine."
Help	Facilitate	"Stretching facilitates recovery."
Change	Variable / Fluctuation	"Heart rate is a key variable ."
Guess	Hypothesis	"Our hypothesis was confirmed."
Show	Demonstrate / Indicate	"The data indicates a positive correlation."
Big	Significant	"There was a significant difference between groups."

8.2 Describing Data and Graphs

Sports science relies heavily on data visualization (heart rate graphs, lactate curves, performance stats). Students must learn to describe trends linguistically.⁴⁸

- **Upward Trends:** Increase, rise, climb, surge, rocket, peak.
 - *Adverbs:* Sharply, rapidly, gradually, slightly.
 - *Example:* "Lactate levels **rose sharply** after the 5th minute."
- **Downward Trends:** Decrease, fall, drop, decline, plummet, dip.
 - *Example:* "Performance **dropped significantly** in the second half."
- **Stability:** Plateau, level off, remain constant, stabilize.
 - *Example:* "Heart rate **plateaued** at 160 bpm."⁵⁰
- **Prepositions:**
 - Increase **by** 10% (the amount of change).

- Increase **to** 10% (the new level).
- Peaked **at** 100 (the specific point).

8.3 The Research Abstract

The abstract is the "shop window" of research. Students learn to write structured abstracts following the **IMRAD** pattern.⁵¹

1. **Introduction (I):** One sentence on the background. "Sprinting requires high explosive power."
2. **Methods (M):** Who and How? "Twenty elite athletes performed plyometric training for 6 weeks." (Past Tense).
3. **Results (R):** Key findings. "The experimental group showed a 5% increase in speed." (Past Tense).
4. **Discussion/Conclusion (D):** Implications. "These findings suggest that plyometrics are effective..." (Present Tense for general truth).⁵³

8.4 Critical Thinking in English

Finally, academic English requires hedging—avoiding absolute statements.

- *Absolute:* "Dehydration causes fatigue." (Too strong).
- *Hedging:* "Dehydration may contribute to fatigue." / "Evidence suggests that..."

This nuance distinguishes a novice writer from a scholar.